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To: Senator Tom Casperson  
Sen. Mike Nofs, Chairman, Senate Energy and Technology Committee  
Governor Snyder

I was unable to attend the hearings or submit comments regarding Senate Bill 438. However, a cursory review of Bill, has raised some serious concerns.

**1. There is no distinction between CLEAN energy and Advanced Cleaner energy.**

CLEAN energy **does not burn anything**. Energy from the sun, geothermal, and the flow of water or wind are CLEAN energy.

**Advanced Cleaner energy should only refer to electricity generated from the burning, or oxidation of carbon based fuels on earth. It is not CLEAN, only a little cleaner.**

The term **Renewable energy** in this document appears to include both Clean and Advanced Cleaner energy sources and others:

- (i) **Biomass**.
- (ii) Solar and solar thermal energy.
- (iii) Wind energy.
- (iv) Kinetic energy of moving water, including all of the following:
  - (A) Waves, tides, or currents.
  - (B) Water released through a dam.
- (v) Geothermal energy.
- (vi) **Municipal solid waste**.
- (vii) **Landfill gas produced by municipal solid waste**.

This is an **essential** distinction, which needs to be addressed in the Bill.. If you don't recognize, measure and regulate the energy differences between these two very different types of energy sources, you and the Legislature are not serving the long term interests of the people of the State of Michigan.

In the short term, this distinction needs to be incorporated into the energy planning for the State of Michigan, to develop an awareness of the impact on the air we breathe and the pollution in the waters of the earth, particularly the Great Lakes, as noted by Governor Snyder in his "Energy" speech.

The State of Michigan's guidelines for consumption of fish from e.g., Big and Little Bay de Noc, clearly demonstrate the degradation of our natural food supply from burning carbon

**Green Bay, Big Bay de Noc, & Little Bay de Noc**

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Carp	PCBs	Any	Do Not Eat <sup>Δ</sup>
Largemouth Bass	PCBs & Mercury	Under 18" Over 18"	2 1
Northern Pike	Mercury	Any	1
Rock Bass	Mercury	Any	8
Smallmouth Bass	PCBs & Mercury	Under 18" Over 18"	2 1
Suckers	PCBs	Any	6 Per Year <sup>2Δ</sup>

Use the Lake Michigan guidelines for any fish species not listed above.

based fuels. Unfortunately, there is no similar, easily quantified, impact of the air particulates and pollution which clog our lungs and degrade our health from the very air we breathe. But there is clear evidence that burning carbon based fuels causes lung health problems.

2. The proposed change in the Net Metering does not promote the installation of solar, wind, hydro and geothermal power by individual customers. There are many long term benefits for the development of widely distributed CLEAN energy, which need to be acknowledged in the Net Metering process. If the bill passes as written it would be a huge step backward for CLEAN energy and the State of Michigan.

Abhi Kantamneni's website provides some very useful comparative estimates to determine what is a "fair rate"

<http://abhilashkantamneni.com/of-turnips-and-panels-a-critical-look-at-michigans-renewable-energy-policy/>

Some key aspects:

- a. The high correlation of solar power output with peak demand periods which have a much higher cost, support a net metering price, to provide capacity when it is most needed.
- b. The need to provide a clear incentive for CLEAN power as compared to any power derived from burning carbon based fuels, to reduce the impact on the air we breathe and the food we eat,
- c. The improved reliability of widely distributed power generation resources throughout our state and nation. As improved energy storage developments occur, this will GREATLY reduce the probabilities of widespread power blackouts. For example:

Most power outages are within a local distribution system. The high voltage transmission systems are exceptionally reliable, with very short term restoration of electric power. It is the ice storm scenario which can take days or weeks to restore power, e.g., the Quebec ice storm which had parts of Maine without electric service for 6 weeks in the winter! This is where the widely distributed solar panels, wind turbines, and hydro dams can keep the lights on and provide basic electric services. I recently visited a number of homes and hotels in England and Wales. Every building had solar panels, even the 16<sup>th</sup> century converted stable into a lovely Bed and Breakfast! The USA is far behind the rest of the developed world, and the State of Michigan is far behind in sound legislation to achieve the broad goals set out in SB 438. A net metering rate of retail IN= retail OUT is probably a reasonable approach, provided there are additional incentives for the installation of CLEAN power as compared to "Advanced Energy" carbon burning systems.

The State of Michigan should be providing additional incentives for distributed CLEAN power to eventually be incorporated in every building throughout the state which uses electric power. Obviously the utilities fear seismic changes in the nature of their power distribution systems, and rightly so. But Michigan has an opportunity to learn from the experience of other states, as well as the power systems in Germany, Italy, England, and Denmark, and become a **Leader**, with visionary policies to provide fair, competitive, widely distributed energy for our economic prosperity.

- d. The net metering policy needs to recognize that solar generation is not only a source of energy, but is also a source of generation capacity and reduces the transmission requirements.

3. The inclusion of "The self-directed plan and information submitted by the customer under subsection (10) are confidential and exempt from disclosure under the freedom of information act..." should be removed. All information related to this Legislation should be available for public scrutiny.
4. The LEED Green Building Council standards should be considered a **MINIMUM**. Other countries, who are serious about reducing the waste of energy, have adopted Passiv House Standards, <http://www.phius.org/>. This Legislation should also cite **Passiv House design standards as the goal**, if we are really serious about reducing waste energy. Passive building cuts energy consumption by 60-80 percent compared to code buildings. Certified passive buildings provide superior comfort and indoor air quality. Passive building principles can be applied to all building typologies--from single-family homes to apartment building to offices and skyscrapers. Passive design strategy carefully models and balances a comprehensive set of factors including heat emissions from appliances and occupants--to keep the building at comfortable and consistent indoor temperatures throughout the heating and cooling seasons. As a result, passive buildings offer tremendous long-term benefits in addition to energy efficiency. This Legislation should provide an incentive for meeting the much higher standards, which provide a much better return for the investment.
5. **Finally, the earmark, the one and only exception to the 10% choice limit in the 2008 Michigan Public Act 286, should be removed from the Michigan energy policy.** *"...any customer operating an iron ore mining facility, iron ore processing facility, or both, located in the Upper Peninsula of this State, shall be permitted to purchase all or any portion of its electricity from an alternative energy supplier, regardless of whether the sales exceed 100% of the serving electric utility's average weather-adjusted retail sales".*

This earmark was the **root cause** of the Presque Isle Power Plant issues, and the subsequent waste of taxpayers time and money. If there are future iron mining projects in the Upper Peninsula, the state guidelines should be followed, with no special earmarks to further disrupt the energy costs in the UP.

**This, and any other hidden earmarks in the proposed SB 438, should be identified and removed. They are not good for the State of Michigan, and they reflect poorly on the Legislative process and the Legislators who approve them.**

Yours truly,

Marilyn Kinsey

